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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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03/12/2004

Bruce Schoenberger

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09/05/2006

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EXAMINER

WALK, SAMUEL J

ART UNIT

PAPER NUMBER

2612

DATE MAILED: 09/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/799,932	SCHOENBERGER ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Samuel J. Walk	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 10 July 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-73, 77, 83, 89 and 101-119 is/are pending in the application.  
     4a) Of the above claim(s) 1-71 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 114-116 is/are allowed.
- 6) ☒ Claim(s) 72, 73, 77, 83, 89, 101-113 and 117-119 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 2612

#### **DETAILED ACTION**

##### ***Status of Claims***

1. In the Amendment dated 07/10/2006, Claims 1-71 have been nonelected, Claims 74-76, 78-82 and 84-88, 90-100 have been cancelled and Claims 115-119 have been added; therefore, Claims 1-73, 77, 83, 89, 101-119 remain pending.

##### ***Election/Restrictions***

2. This application contains claims 1-71 are drawn to an invention nonelected with traverse. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

3. In addition, Examiner notes that if the Applicant wishes to pursue the nonelected claims, a Petition must be filed.

##### ***Claim Objections***

4. Claims 117-119 are objected to because of the following informalities: said claims depend on Claim 71 which has been withdrawn. It is believed Claims 117-119 should be dependent on Claim 72. Appropriate correction is required.

Art Unit: 2612

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 72-73, 77, 89 and 113 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hardman in view of Cormier (US 6011463).

Regarding Claims 72-73, Hardman discloses an electronic tire management system wherein a pressure sensor 74 with power source 94, such as a battery, monitors the pressure of a tire. Upon an alarm condition, i.e. low pressure, tag 14 transmits an alarm signal (first output signal) to reader/transceiver RT 30 which then transmits such an alarm condition (second output signal) through a satellite link which then relays (third output signal) it to a remote server 50, see para. [0123, 0124 and 0140]. Hardman further discloses tag 14 determines if an alarm condition exists (comparison), i.e. the sensor data values are outside of a stored threshold, see para. [0155]. Hardman does not disclose mounting the transducer on the rim of the tire.

Art Unit: 2612

However, Cormier teaches of a universal, remote, continuous vehicle tire air pressure monitoring and reporting system wherein the single rim wheel transmitter 10 with pressure indicator lights 75, 80, 85 and 90 is connected to a conventional tire valve 20, see Col. 5 lns 25-67 and Col. 6 lns 1-14. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Cormier into the system of Hardman because it would have been advantageous to include a means on the outside for easier viewing at any moment.

Regarding Claim 77, see above rejection in reference to Claims 72-73. In addition, Hardman disclose the alarm signal constitutes an out of range condition for temperature and pressure and thus "out of range" includes above and below conditions, see para. [0141].

Regarding Claim 89, see above rejection in reference to Claim 72. In addition, see Figs. 1 and 1a, which show a radially inboard positioning.

Regarding Claim 113, see above rejections in reference to Claim 72. In addition, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the self-powered encapsulated tags of Hardman as integrated solid state monolithic chips because they are readily

Art Unit: 2612

available and functionally equivalent apparatuses in that the circuitry is designed according to the user's or manufacturer's specifications of whether to utilize solid state devices in the circuitry and whether to utilize only one chip or multiple chips within the encapsulation.

Regarding Claims 117-119, Examiner takes Official Notice that the concept and the advantages of plate-type, core/coil-type and piezoelectric-type transducers are both well known and expected in the art. Therefore, one having ordinary skill in the art at the time the invention was made would have readily recognized the use of plate-type, core/coil-type and piezoelectric-type transducers because each is a readily available and functionally equivalent component.

7. Claims 83, 101-102 and 105-112 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hardman in view of Cormier and in further view of Feng (US 5100206).

Regarding Claim 83, see above rejection in reference to Claim 72. Hardman and Cormier do not disclose a gauge displaying pressure. However, Feng teaches of an automobile wheel cover able to display tire pressure wherein air pressure meter display the tire pressure at all times, see Col. 3 lns 40-61.

Art Unit: 2612

Regarding Claims 101-102, see above rejection in reference to Claims 72 and 83. In addition, Hardman discloses vehicle 12 is shown with two tires 10A and 10B each having respective tire tags 14A and 14B, see para. [0106].

Regarding Claim 105, see above rejection in reference to Claim 102, specifically, the determination of an alarm condition (comparison) as described in the rejection of Claim 72.

Regarding Claim 106, see above rejection in reference to Claim 102. In addition, Hardman further discloses the determination of an alarm condition (comparison) is performed within tags 14 and tags 14 are mounted on the respective tires.

Regarding Claim 107, see above rejection in reference to Claim 102. In addition, Hardman further discloses the communication channel may include an RS-232 serial link, see para. [0108].

Regarding Claim 108, see above rejection in reference to Claims 101-102 and 76.

Regarding Claims 109-112, see above rejection in reference to Claims 101-102. In addition, as stated above, Hardman discloses a vehicle shown with two tires (multi-wheel) each having tire tags, see para. [0106].

Art Unit: 2612

8. Claims 103-104 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hardman in view of Schaeffer (US 5048116).

Regarding Claim 103, see above rejection in reference to Claims 101-102. Hardman discloses the utilization of frequency hopping to minimize interference and to transmit the maximum signal radiation over a single channel, see para. [0114] and Fig. 12. Hardman does not specifically disclose the utilization of a multiplexer in the frequency hopping. However, Schaeffer teaches of a signal routing system wherein signals are transmitted over a single channel also utilizing frequency hopping. Schaeffer also teaches baseband multiplexer 20 is necessary to support such a mode of operation, see Col. 3 lns 33-68. Therefore, one having ordinary skill in the art at the time the invention was made would have incorporated the teachings of Schaeffer into the system of Hardman because multiplexers are necessary in frequency hopping, as stated by Schaeffer.

Regarding Claim 104, see above rejection in reference to Claim 103. In addition, Hardman discloses that tag 14 includes RAM memory 16 that records pressure history, see para. [0150].



Art Unit: 2612

***Allowable Subject Matter***

9. Claims 114-116 are allowed.

10. The following is a statement of reasons for the indication of allowable subject matter: Claim 114 has been found to be novel and inventive because prior art fails to show or teach monitoring tire pressure wherein an aerodynamic wheel cover assembly comprises a substantially elliptically-shaped dome, an exhaust port positioned at an apex of the dome, a bridge of the port, a mechanical pressure gauge, an intake valve, a valve stem, a valve assembly and a gauge wherein the stem, hose, gauge and valve are in communication such that when the hose is in communication with a fill-valve of the tire, the gauge displays pressure and the tire can be inflated or deflated via the stem, a wheel clip assembly base portion, a wheel clip assembly bracket portion, a spring clip and a Dzus fastener. Claims 115-116 have been found to be novel and inventive because prior art fails to show an apparatus for monitoring tire pressure in a tire of a multi-wheeled vehicle wherein a transducer is mounted on a wheel radially inboard of the tire for sensing pressure, a comparator and a transmitter located within a dome sized to be securely attached to the rim for aerodynamic protection and sending tire pressure information to a remote locale.

***Response to Arguments***

11. Applicant's arguments with respect to claims 72-73, 77, 83, 101-119 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

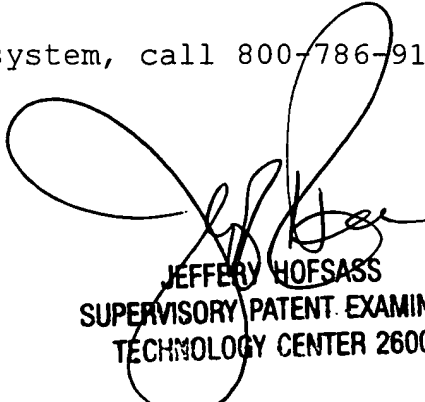
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel J. Walk whose telephone number is (571) 272-2960. The examiner can normally be reached on M-F: 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Hofsass can be reached on (571) 272-2981. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SJW



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